

Reference = XIAO 13; PR D87 057501  
Verifier code = SETH

*PLEASE READ NOW*

*PLEASE  
REPLY  
WITHIN  
ONE WEEK*

Normally we send all verifications for one experiment to one person, usually the spokesperson or data-analysis coordinator, who then distributes them to the appropriate people. Please tell us if we should send the verifications for your experiment to someone else.

Kamal K Seth

EMAIL: kseth@northwestern.edu

---

July 21, 2016

Dear Colleague,

- (1) Please check the results of your experiment carefully. They are marked.
- (2) Please reply within one week.
- (3) Please reply even if everything is correct.
- (4) IMPORTANT!! Please tell WHICH papers you are verifying. We have lots of requests out.
- (5) Feel free to make comments on our treatment of any of the results (not just yours) you see.

Thank you for helping us make the Review accurate and useful.

Sincerely,

Simon Eidelman  
BINP, Budker Inst. of Nuclear Physics  
Prospekt Lavrent'eva 11  
RU-630090 Novosibirsk  
Russian Federation

EMAIL: [simon.eidelman@cern.ch](mailto:simon.eidelman@cern.ch)

# $c\bar{c}$ MESONS

 $\psi(4160)$ 

$$I^G(J^{PC}) = 0^-(1^{--})$$

NODE=MXXX025

NODE=M025

## $\psi(4160)$ BRANCHING RATIOS

NODE=M025225

$$\Gamma(\gamma X(3872) \rightarrow \gamma J/\psi \pi^+ \pi^-) / \Gamma_{\text{total}} \quad \Gamma_{34} / \Gamma$$

NODE=M025R34  
NODE=M025R34

VALUE	CL%	DOCUMENT ID	COMMENT
$<0.68 \times 10^{-4}$	90	23 XIAO	13 $\psi(4160) \rightarrow \gamma J/\psi \pi^+ \pi^-$

YOUR DATA

YOUR NOTE <sup>23</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R34;LINKAGE=A

$$\Gamma(\gamma X(3915) \rightarrow \gamma J/\psi \pi^+ \pi^-) / \Gamma_{\text{total}} \quad \Gamma_{35} / \Gamma$$

NODE=M025R35  
NODE=M025R35

VALUE	CL%	DOCUMENT ID	COMMENT
$<1.36 \times 10^{-4}$	90	24 XIAO	13 $\psi(4160) \rightarrow \gamma J/\psi \pi^+ \pi^-$

YOUR DATA

YOUR NOTE <sup>24</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R35;LINKAGE=A

$$\Gamma(\gamma X(3930) \rightarrow \gamma J/\psi \pi^+ \pi^-) / \Gamma_{\text{total}} \quad \Gamma_{36} / \Gamma$$

NODE=M025R36  
NODE=M025R36

VALUE	CL%	DOCUMENT ID	COMMENT
$<1.18 \times 10^{-4}$	90	25 XIAO	13 $\psi(4160) \rightarrow \gamma J/\psi \pi^+ \pi^-$

YOUR DATA

YOUR NOTE <sup>25</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R36;LINKAGE=A

$$\Gamma(\gamma X(3940) \rightarrow \gamma J/\psi \pi^+ \pi^-) / \Gamma_{\text{total}} \quad \Gamma_{37} / \Gamma$$

NODE=M025R37  
NODE=M025R37

VALUE	CL%	DOCUMENT ID	COMMENT
$<1.47 \times 10^{-4}$	90	26 XIAO	13 $\psi(4160) \rightarrow \gamma J/\psi \pi^+ \pi^-$

YOUR DATA

YOUR NOTE <sup>26</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R37;LINKAGE=A

$$\Gamma(\gamma X(3872) \rightarrow \gamma \gamma J/\psi) / \Gamma_{\text{total}} \quad \Gamma_{38} / \Gamma$$

NODE=M025R38  
NODE=M025R38

VALUE	CL%	DOCUMENT ID	COMMENT
$<1.05 \times 10^{-4}$	90	27 XIAO	13 $\psi(4160) \rightarrow \gamma \gamma J/\psi$

YOUR DATA

YOUR NOTE <sup>27</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R38;LINKAGE=A

$$\Gamma(\gamma X(3915) \rightarrow \gamma \gamma J/\psi) / \Gamma_{\text{total}} \quad \Gamma_{39} / \Gamma$$

NODE=M025R39  
NODE=M025R39

VALUE	CL%	DOCUMENT ID	COMMENT
$<1.26 \times 10^{-4}$	90	28 XIAO	13 $\psi(4160) \rightarrow \gamma \gamma J/\psi$

YOUR DATA

YOUR NOTE <sup>28</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R39;LINKAGE=A

$$\Gamma(\gamma X(3930) \rightarrow \gamma \gamma J/\psi) / \Gamma_{\text{total}} \quad \Gamma_{40} / \Gamma$$

NODE=M025R40  
NODE=M025R40

VALUE	CL%	DOCUMENT ID	COMMENT
$<0.88 \times 10^{-4}$	90	29 XIAO	13 $\psi(4160) \rightarrow \gamma \gamma J/\psi$

YOUR DATA

YOUR NOTE <sup>29</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R40;LINKAGE=A

$$\Gamma(\gamma X(3940) \rightarrow \gamma \gamma J/\psi) / \Gamma_{\text{total}} \quad \Gamma_{41} / \Gamma$$

NODE=M025R41  
NODE=M025R41

VALUE	CL%	DOCUMENT ID	COMMENT
$<1.79 \times 10^{-4}$	90	30 XIAO	13 $\psi(4160) \rightarrow \gamma \gamma J/\psi$

YOUR DATA

YOUR NOTE <sup>30</sup> Obtained by analyzing CLEO data but not authored by the CLEO Collaboration.

NODE=M025R41;LINKAGE=A

## $\psi(4160)$ REFERENCES

NODE=M025

YOUR PAPER XIAO 13 PR D87 057501 T. Xiao *et al.* (NWES, WAYN)

REFID=55381